

Utah Generated Renewable Energy Electricity Network



UGREEN Board Meeting

October 19, 2010
Salt Lake City, Utah

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State Infrastructure Authorities Meeting

- **Attendees from Kansas, Wyoming, New Mexico, Colorado**
 - **Presentations**
 - **Kansas:** Board, no staff
 - **Wyoming:** \$10m venture fund for project development
 - **New Mexico:** Going through first bond offering
 - **Colorado:** Staffed out of Governor's Energy Advisor, proposing legislation to either fund or dissolve authority
- **Collaboration on Strategic Initiatives**
 - **Federal legislation: Tax exemption**
 - **Under review with Senator Bingaman**
- **Monthly Conference Call**
 - **Annual Meeting**

Governor's Energy Initiative

10 Year Strategic Energy Plan

- 5 subcommittees:
 - Energy Development & Environment
 - Demand Side Management (Energy Efficiency) and Consumers
 - Job Creation & Manufacturing
 - **Transmission, Infrastructure, & Transportation**
 - Developing & Applying Technology and Science

Governor's Energy Initiative

10 Year Strategic Energy Plan

- Public Hearings
 - Price, Cedar City, **Salt Lake City, Vernal**
 - Variety of opinions
 - Constructive
 - Even-keeled
 - Will be incorporated into report
 - No comments that addressed transmission directly, but all energy development impacts transmission

Governor's Energy Initiative

10 Year Strategic Energy Plan

- Timeline:
 - October 21, 2010: Subcommittee Reports to Editing Committee
 - November 3, 2010: Rough Draft of full report to task force, available for public comment
 - November 10, 2010: Final Public Hearing
 - November 16, 2010: Final Task Force mark-up
 - November 22, 2010: Governor Approval
- If interested in seeing draft, please email

Update on Funding

- Governor's Budget Request
 - Status: Submitted
 - GOPB
- Continued correspondence with Federal Delegation
- Grant opportunities scarce
- Looking at alternatives
 - Market UGREEN with REDI?
 - Run out of Governor's Energy Advisor
 - No full-time staff? Board governed?

Business Plan/Application

- Business Plan draft is being modified based on comments received from the Board and outside readers
 - More work to come
 - Anticipated date of adoption: December 2010
- Application Process
 - Modeled after GOED REDI Incentive
 - Anticipated date of adoption: December 2010

Indicative Economics- 200 MW Wind Farm

Savings via UGREEN (1)

	Base Case	5%	10%	15%
	Capital Costs (\$M)			
20 MW Wind Farm	\$400.00	\$400.00	\$400.00	\$400.00
50 Mile Gentie	<u>25</u>	<u>23.75</u>	<u>22.5</u>	<u>21.25</u>
Total	\$425.00	\$423.75	\$422.50	\$421.25
Savings (\$)		\$1.25	\$2.50	\$3.75
<i>Percent Savings</i>		<i>0.29%</i>	<i>0.59%</i>	<i>0.88%</i>

	Power Price (\$/MWh)			
20 MW Wind Farm	\$51.76	\$51.76	\$51.76	\$51.76
50 Mile Gentie	<u>3.24</u>	<u>3.08</u>	<u>2.92</u>	<u>2.75</u>
Total	\$55.00	\$54.84	\$54.68	\$54.51
Savings (\$/MWh)		\$0.16	\$0.32	\$0.49
<i>Percent Savings</i>		<i>0.29%</i>	<i>0.59%</i>	<i>0.88%</i>

(1) Reduction in transmission costs due to lower cost of capital

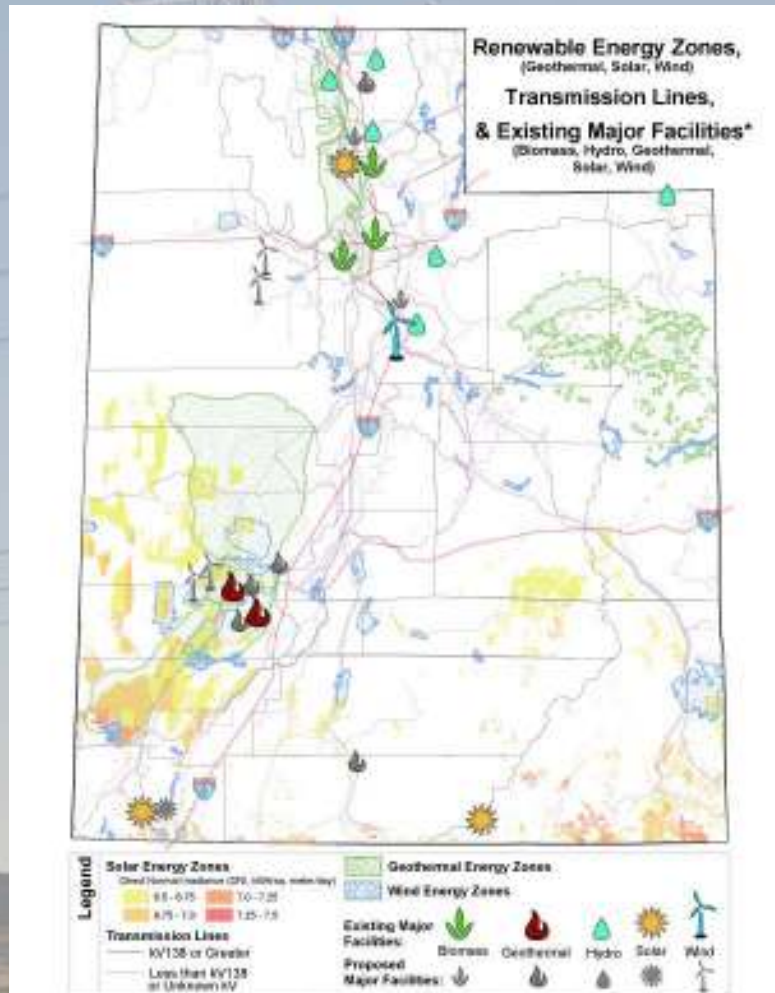
Utah Renewable Energy Zones

This map, titled "Renewable Energy Zones, (Geothermal, Solar, Wind) Transmission Lines, & Existing Major Facilities* (Biomass, Hydro, Geothermal, Solar, Wind)", displays the state of Utah with various energy resources. The map uses color-coded zones: yellow for Solar Energy Zones (Class 1 potential), orange for Solar Energy Zones (Class 2 potential), green for Geothermal Energy Zones, and blue for Wind Energy Zones. It also shows a network of transmission lines and icons for existing major facilities (Biomass, Geothermal, Hydro, Solar, Wind) and proposed major facilities (Biomass, Geothermal, Hydro, Solar, Wind). A legend at the bottom left explains the symbols and color coding.

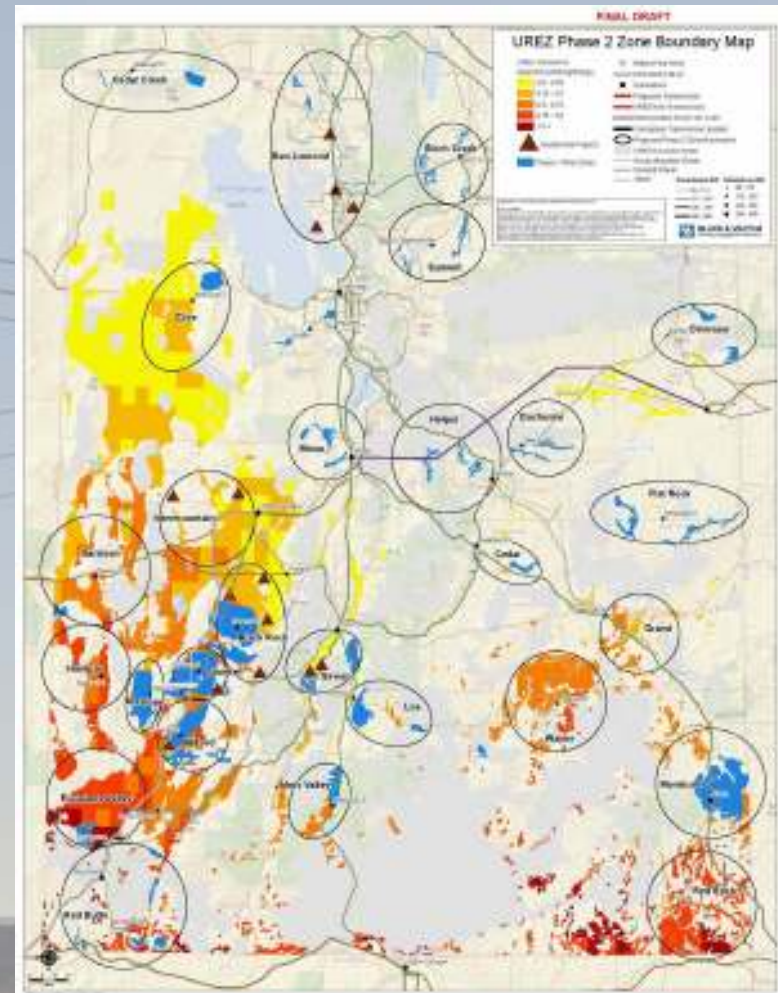
Phase I: Identification of Utah's renewable energy resource potential and establishment of REZs

This map, titled "UREZ Phase 2 Zone Boundary Map", shows the state of Utah with various energy resources. The map uses color-coded zones: yellow for Solar Energy Zones (Class 1 potential), orange for Solar Energy Zones (Class 2 potential), green for Geothermal Energy Zones, and blue for Wind Energy Zones. It also shows a network of transmission lines and icons for existing major facilities (Biomass, Geothermal, Hydro, Solar, Wind) and proposed major facilities (Biomass, Geothermal, Hydro, Solar, Wind). A legend at the bottom left explains the symbols and color coding.

Phase II: Analysis of transmission requirements to connect potential renewable resources to grid



Phase I: Identification of Utah's renewable energy resource potential and establishment of REZs



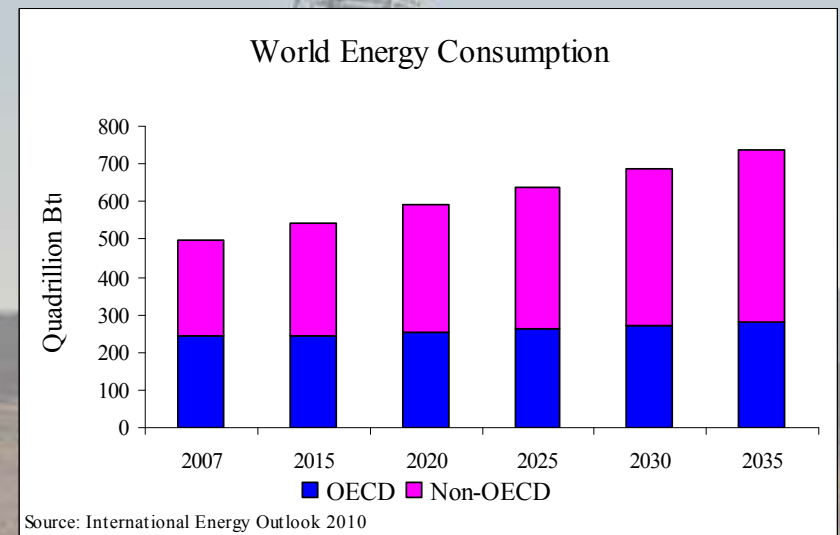
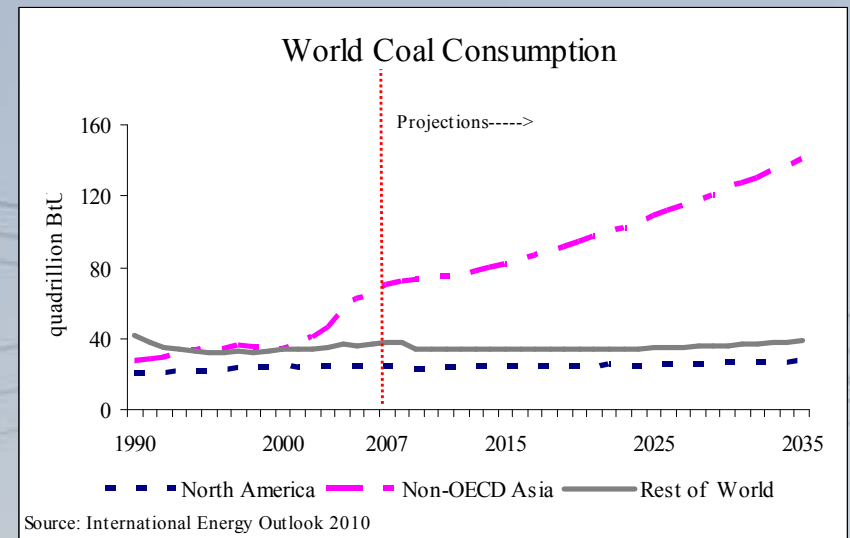
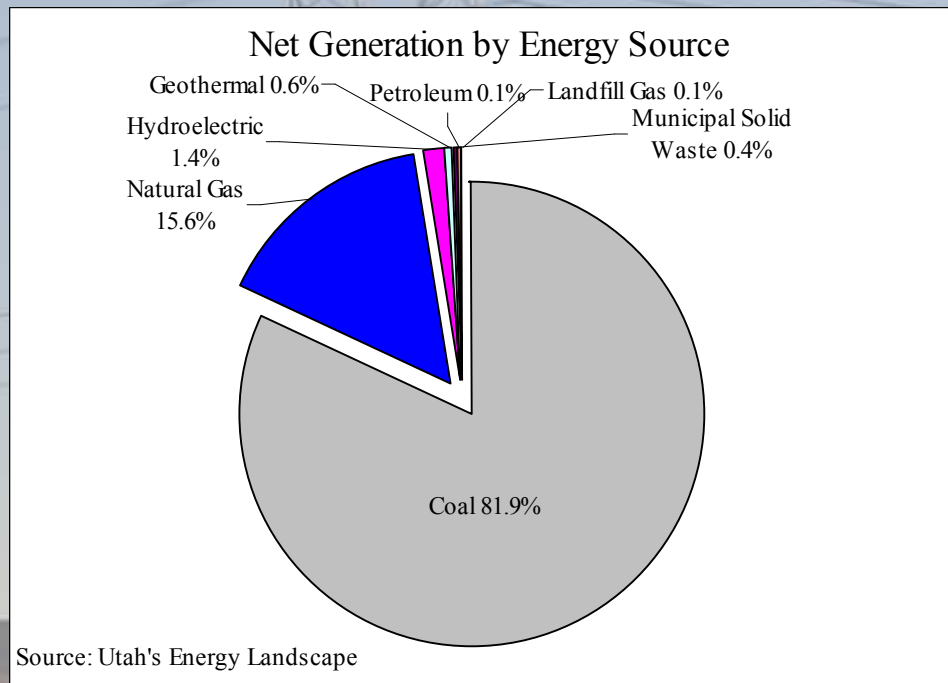
Phase II: Analysis of transmission requirements to connect potential renewable resources to grid

Projects/Companies

- Italian Geothermal
 - 28 MW in Beaver County
- Spanish Utility
 - 50 MW Solar in NE Utah
- French Renewable Energy Developer
 - 50 MW Wind in SW Utah
 - 75 MW Solar in SW Utah
- Large Regulated US Utility
 - 100 MW Wind in Central/Eastern Utah
- International Renewable Energy Developer
 - 100 MW Solar in SW Utah

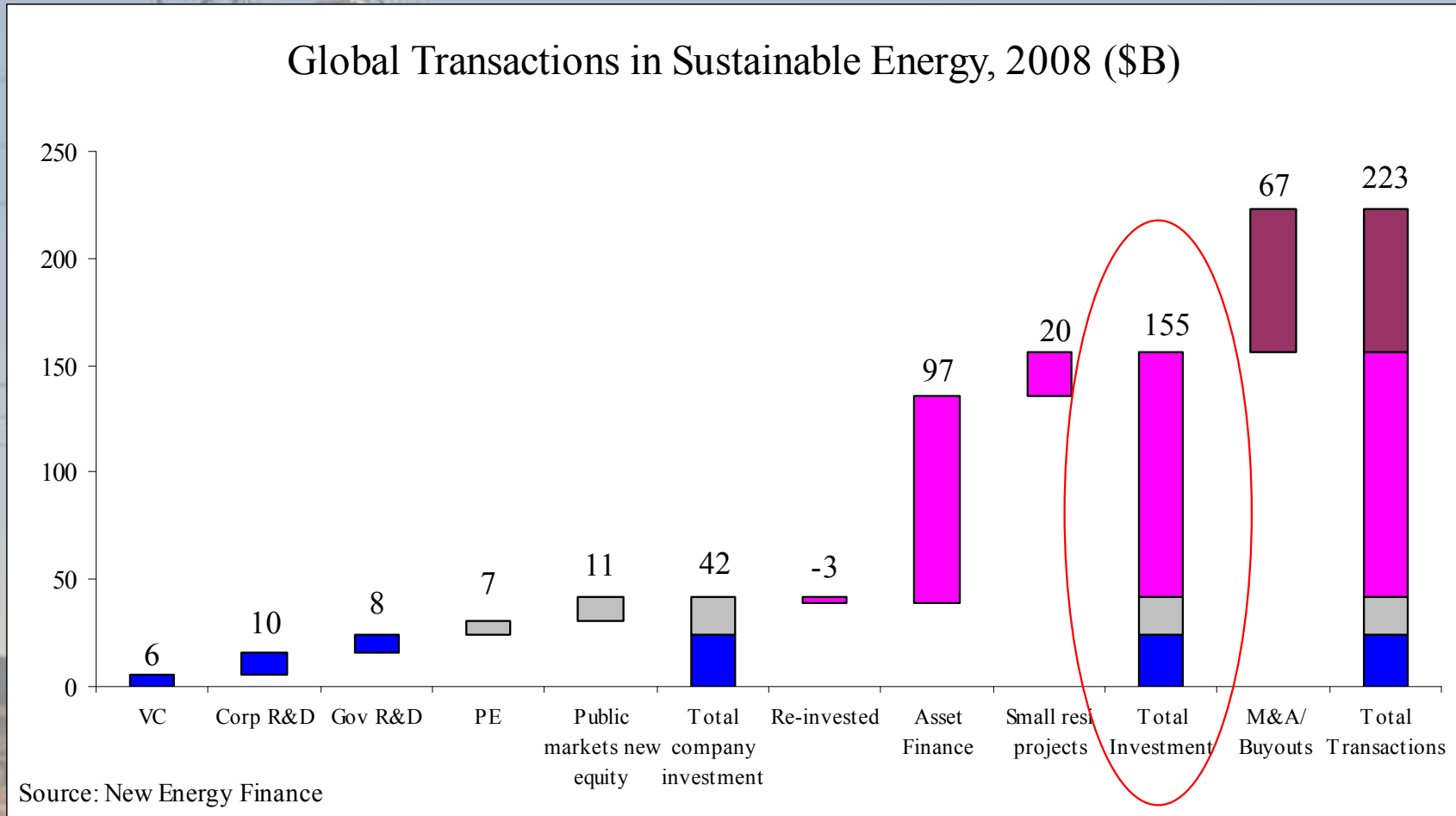


Utah's energy mix in the context of global trends



Sustainable Energy is a \$155B industry

What is Utah's share of the pie?



UGREEN's key accomplishments over the last six months

- Defined and established the organizational and structural framework within which to operate
 - Includes defining Project Selection Criteria and Evaluation Procedures
 - Draft Business Plan and Strategic Vision
- Issued first Letter of Support to PurpleEnergy, a company pursuing hybrid solar-geothermal technologies in southwestern Utah
- Organized and convened multi-state infrastructure authority meeting: CO, WY, NM, and Kansas
- Selected to staff the Governor's Energy Initiative's Transmission, Infrastructure, and Transportation Subcommittee tasked with writing Utah's 10 Year Strategic Energy Plan

Goals for next six months

- Securing funding to continue UGREEN's existence after ARRA funding expires next summer
 - Includes pursuing federal appropriations, state budget increment, legislative amendment to include fiscal note...
- Encourage developers to apply for UGREEN's various mechanisms of support
 - Find suitable candidate for UGREEN bond financing
- Lead and participate in regional state infrastructure initiatives
 - Legislation for federal tax exemption?
- Continue to lend support and expertise to State of Utah on renewable energy development



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